

# Claims

1. ~~A tooth bleaching composition free of a hydrocarbon humectant comprising a~~  
peroxide compound from about 1-30% by weight, water from about 30-60% by weight  
and polyoxyethylene-polyoxypropylene non-ionic surfactant gelling agent from about  
25 to 30% by weight and an inhibitor of catalase from about 0.1 to 2% by weight.

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2. The tooth bleaching composition according to claim 1, which includes a mixed metal  
chelating system comprised of:

- a) an organic chelating agent
- b) a condensing phosphate chelating agent
- c) a metal precipitating agent.

3. The tooth bleaching composition according to claim 1, which includes a mixed  
surfactant system comprising an anionic surfactant and a non-ionic surfactant.

4. The tooth bleaching composition according to claim 1, which includes an inhibitor of  
catalase.

5. The tooth bleaching composition according to claim 1 wherein the peroxide  
containing compound is hydrogen peroxide.

6. ~~The tooth bleaching composition according to claim 1 wherein the peroxide~~  
~~containing compound is carbamide peroxide.~~

7. The tooth bleaching composition according to claim 1 wherein the carrier of peroxide  
is water.

8. The tooth bleaching composition according to claim 1 wherein the gelling agent is  
polyoxyethylene-polyoxypropylene non-ionic surfactant.

9. The tooth bleaching composition according to claim 2 wherein the organic chelating  
agent is 1-hydroxyethylidene-1,1-diphosphonic acid consisting of about 0.25% to 5%  
by weight of the composition.

10. The tooth bleaching composition according to claim 2 wherein the condensing  
phosphate chelating agent is sodium pyrophosphate, sodium triphosphate, trisodium  
phosphate or a combination thereof comprising about 0.25 to 2% by weight of the  
composition.

11. The tooth bleaching composition according to claim 2 wherein the metal precipitating  
agent is sodium fluoride comprising about 0.1 to 1% of the composition.

12. The tooth bleaching composition according to claim 3 wherein the anionic surfactant  
is sodium lauryl sulfate comprising about 0.5 to 2.5% of the composition

13. The tooth bleaching composition according to claim 3 wherein the non-ionic  
surfactant is Tween 20 comprising about 0.5 to 3% of the composition.

14. The method according to claim 1 further including placing the composition in a dental splint  
prior to applying the composition to the tooth surface.

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15. The method according to claim 1, by including applying the composition onto the tooth surface then applying the tray to prevent contact between the lips and the gel.

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16. The method according to claim 1, by including isolating the lips with a cheek retractor, applying a bioadhesive composition onto the gums and applying the whitening composition onto the teeth.

17. The method according to claim 1, by including applying the composition to a toothbrush and contacting the tooth surfaces.

18. The method of whitening teeth including the following steps to protect the lips, the gingiva and other soft tissues:by

- applying the bioadhesive material to the gums
- applying the peroxide composition to the teeth
- applying a flexible film which does not react with the peroxide composition in contact with the bioadhesive material and the peroxide composition.
- Molding the flexible film to cover the surfaces of the teeth to prevent contact between the peroxide composition and the lips, tongue and other soft tissues of the mouth.

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